/\*Adaptare 10

Obtineti toate spitalele si listele cu medici ce lucreaza pentru acestea

Rezolvati problema folosind:

a. cele trei tipuri de cursoare studiate;

b. expresii cursor.

\*/

/\*Explicit cursor\*/

DECLARE CURSOR hidc IS

SELECT hospital\_id

FROM hospitals\_t;

TYPE medics\_table IS TABLE OF medics\_t.medic\_name%TYPE;

h\_id hospitals.hospital\_id%TYPE;

h\_medics\_names medics\_table;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Explicit cursor');

OPEN hidc;

LOOP

FETCH hidc INTO h\_id;

EXIT WHEN hidc%NOTFOUND;

-- Getting the medic names

SELECT m.medic\_name BULK COLLECT INTO h\_medics\_names

FROM hospitals\_medics\_t hm JOIN medics\_t m

ON m.medic\_id = hm.medic\_id WHERE hm.hospital\_id = h\_id;

--Printing the list of medics for current hospital

IF h\_medics\_names.COUNT = 0 THEN

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id) || ' has no medics');

ELSE

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id) || ' medic list: ');

FOR i in h\_medics\_names.FIRST..h\_medics\_names.LAST LOOP

DBMS\_OUTPUT.PUT\_LINE(' ' || h\_medics\_names(i));

END LOOP;

END IF;

END LOOP;

CLOSE hidc;

END;

/

/\*Loop cursor\*/

DECLARE CURSOR hidc IS

SELECT hospital\_id

FROM hospitals\_t;

TYPE medics\_table IS TABLE OF medics\_t.medic\_name%TYPE;

h\_medics\_names medics\_table;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Loop cursor');

FOR h\_id IN hidc LOOP

-- Getting the medic names

SELECT m.medic\_name BULK COLLECT INTO h\_medics\_names

FROM hospitals\_medics\_t hm JOIN medics\_t m

ON m.medic\_id = hm.medic\_id WHERE hm.hospital\_id = h\_id.hospital\_id;

--Printing the list of medics for current hospital

IF h\_medics\_names.COUNT = 0 THEN

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id.hospital\_id) || ' has no medics');

ELSE

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id.hospital\_id) || ' medic list: ');

FOR i in h\_medics\_names.FIRST..h\_medics\_names.LAST LOOP

DBMS\_OUTPUT.PUT\_LINE(' ' || h\_medics\_names(i));

END LOOP;

END IF;

END LOOP;

END;

/

DECLARE

has\_medics BOOLEAN;

/\* Loop cursor subquery\*/

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Loop cursor subquery');

FOR h\_id IN (SELECT hospital\_id FROM hospitals\_t) LOOP

has\_medics := False;

-- Getting the medic names

FOR m\_name in (SELECT m.medic\_name medic\_name

FROM hospitals\_medics\_t hm JOIN medics\_t m

ON m.medic\_id = hm.medic\_id WHERE hm.hospital\_id = h\_id.hospital\_id) LOOP

--If at first iteration we also print the hospital

if has\_medics = False THEN

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id.hospital\_id) || ' medic list: ');

END IF;

-- Printing the current medic and setting has\_medics to True

DBMS\_OUTPUT.PUT\_LINE(' ' || m\_name.medic\_name);

has\_medics := True;

END LOOP;

-- If no medics are in current hospital we print appropriate message

IF has\_medics = False THEN

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id.hospital\_id) || ' has no medics');

END IF;

END LOOP;

END;

/

/\*Cursor expressions\*/

DECLARE

TYPE refcursor IS REF CURSOR;

CURSOR hidc IS

SELECT hospital\_id,

CURSOR (SELECT m.medic\_name

FROM hospitals\_medics\_t hm JOIN medics\_t m

ON m.medic\_id = hm.medic\_id WHERE hm.hospital\_id = h.hospital\_id)

FROM hospitals\_t h;

h\_id hospitals\_t.hospital\_id%TYPE;

medics\_names\_c refcursor;

medic\_name medics\_t.medic\_name%TYPE;

has\_medics BOOLEAN;

BEGIN

OPEN hidc;

LOOP

FETCH hidc INTO h\_id, medics\_names\_c;

EXIT WHEN hidc%NOTFOUND;

has\_medics := False;

LOOP

FETCH medics\_names\_c INTO medic\_name;

EXIT WHEN medics\_names\_c%NOTFOUND;

if has\_medics = False THEN

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id) || ' medic list: ');

has\_medics := True;

END IF;

DBMS\_OUTPUT.PUT\_LINE(' ' || medic\_name);

END LOOP;

IF has\_medics = False THEN

DBMS\_OUTPUT.PUT\_LINE(' Hospital with id ' || to\_char(h\_id) || ' has no medics');

END IF;

END LOOP;

CLOSE hidc;

END;

/

